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EXAMINER

YODER III, CHRISS S

ART UNIT

PAPER NUMBER

2622

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/621,264	<b>Applicant(s)</b> HAYAISHI, IKUO	
	<b>Examiner</b> CHRISS S. YODER III	<b>Art Unit</b> 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16,22 and 24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16,22 and 24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

Applicant's election of claims 1-16, 22, and 24 in the reply filed on April 28, 2008 is acknowledged. Because applicant did not distinctly traverse the restriction requirement, the election has been treated as an election without traverse.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7, 15 and 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 recites the limitation "within a second predetermined range" in line 6. However, there is no preceding "first predetermined range". There is insufficient antecedent basis for this limitation in the claim. Therefore, the Examiner believes this should be changed to "within a predetermined range".

Claims 15 and 16 recite the limitation "the area is" in line 2. There is insufficient antecedent basis for this limitation in the claim. Therefore, the Examiner believes this should be changed to "the second type area is".

For purposes of examination, the claims will be examined as understood by the Examiner.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. **Claims 1-3, 5-6, 10-12, 22, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Sano (US Patent 5,739,924).**
2. In regard to **claim 1**, note Sano discloses a method of performing image processing using image data generated by an image generator and image generation record information that is associated with the image data (column 1, lines 63-67) and that includes at least supplementary light source flash information at the time of generation of the image data (column 4, lines 46-51), the method comprising judging whether to execute image quality adjustment processing on the basis of the supplementary light source flash information contained in the image generation record information (column 8, line 40 – column 10, line 18 and figure 3), and in case it is judged to execute the image quality adjustment processing, executing the image quality adjustment processing to adjust the image data so that variation in brightness values is minimized in a highest value range within an entire possible range for brightness values represented by the image data (column , lines and figure 6).
3. In regard to **claim 2**, note Sano discloses that the image quality adjustment includes judging, on the basis of the supplementary light source flash information contained in the image generation record information, whether there was illumination by

the supplemental light source at the time of generation of the image data is made, and executing the image quality adjustment processing in case a judgment (a) to the effect that "there was illumination by the supplemental light source at the time of generation of the image data" is realized (column 8, line 57—column 9, line 61).

4. In regard to **claim 3**, note Sano discloses that the image generation record information further includes information relating to a distance between a subject and the image generator of the image data at the time of generation of the image data (column 4, lines 46-51), and the image quality adjustment includes performing a process wherein regardless of realization of the judgment (a), in case a judgment (b) to the effect that "the distance from the subject is not within a first predetermined close range" is realized, execution of the image quality adjustment processing is halted, or a degree of brightness value adjustment in the image quality adjustment processing is reduced (column 6, line 64 – column 7, line 25).

5. In regard to **claim 5**, note Sano discloses that the image generation record information further includes information relating to aperture value of the image generator at the time of generation of the image data (column 4, lines 46-51), and the image quality adjustment includes adjusting the first predetermined close range at least on the basis of the aperture value (column 8, lines 40-56).

6. In regard to **claim 6**, note Sano discloses that the image generation record information further includes information relating to sensitivity of an optical circuit of the image generator at the time of generation of the image data (column 4, lines 46-51; the aperture and speed values are related to the sensitivity), and the image quality

adjustment includes adjusting the first predetermined close range at least on the basis of the optical circuit sensitivity (column 8, lines 40-56).

7. In regard to **claim 10**, note Sano discloses that the image generation record information further contains information relating to a distance between a subject and the image generator at the time of generation of the image data (column 4, lines 46-51), and the image quality adjustment includes adjusting a degree of brightness value adjustment in the image quality adjustment processing at least on the basis of distance from the subject (column 6, line 64 – column 7, line 25).

8. In regard to **claim 11**, note Sano discloses that the image generation record information further includes information relating to aperture value of the image generator at the time of generation of the image data (column 4, lines 46-51), and the image quality adjustment includes adjusting a degree of brightness value adjustment in the image quality adjustment processing at least on the basis of the aperture value (column 8, lines 40-56).

9. In regard to **claim 12**, note Sano discloses that the image generation record information further includes information relating to sensitivity of an optical circuit of the image generator at the time of generation of the image data (column 4, lines 46-51; the aperture and speed values are related to the sensitivity), and the image quality adjustment includes adjusting a degree of brightness value adjustment in the image quality adjustment processing at least on the basis of the sensitivity (column 8, lines 40-56).

10. In regard to **claim 22**, this is an apparatus claim, corresponding to the method of claim 1. Therefore, claim 22 has been analyzed and rejected as previously discussed with respect claim 1.

11. In regard to **claim 24**, this is a computer product claim, corresponding to the method of claim 1. Therefore, claim 24 has been analyzed and rejected as previously discussed with respect claim 1.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. **Claims 4, 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sano (US Patent 5,739,924) in view of Sosa et al. (US Patent 5,016,039).**

13. In regard to **claim 4**, note Sano discloses a method of performing image processing using image data generated by an image generator and image generation record information that is associated with the image data, as discussed with respect to claim 3 above. Therefore, it can be seen that Sano fails to explicitly disclose that the image generation record information further includes information relating to quantity of light of the supplemental light source at the time of generation of the image data, and that the image quality adjustment includes adjusting the first predetermined close range

at least on the basis of the quantity of light. However, Sano does disclose that the “close range” can be adjusted in connection with photographic information.

In analogous art, Sosa discloses the use of an image generation record information that includes information relating to the quantity of light of a supplemental light source at the time of generation of the image data (column 15, lines 53-67), and an image quality adjustment that adjusts an image based on at least on the basis of the quantity of light (column 15, lines 53-67). Sosa teaches that the use of image generation record information that includes information relating to the quantity of light of a supplemental light source at the time of generation of the image data, and an image quality adjustment that adjusts an image at least on the basis of the quantity of light is preferred in order to process the image for proper reproduction of colors with respect to the ratio of natural and supplemental lighting (column 15, lines 53-67). Therefore, it would have been obvious to one of ordinary skill in the art to modify Sano by combining the “close range” adjustment of Sano to be adjusted corresponding to the information relating to quantity of light of the supplemental light source at the time of generation of the image data in order to reproduce the image with a proper balance of natural and supplemental lighting, as suggested by Sosa.

14. In regard to **claim 7**, note Sano discloses a method of performing image processing using image data generated by an image generator and image generation record information that is associated with the image data, as discussed with respect to claim 2 above. Therefore, it can be seen that Sano fails to explicitly disclose that the image generation record information further includes information relating to quantity of



light of the supplemental light source at the time of generation of the image data, and the image quality adjustment includes wherein regardless of realization of the judgment (a), when a judgment (c) to the effect that “the quantity of light is not within a predetermined range” is realized, execution of the image quality adjustment processing is halted, or a degree of brightness value adjustment in the image quality adjustment processing is reduced.

In analogous art, Sosa discloses the use of an image generation record information that includes information relating to quantity of light of the supplemental light source at the time of generation of the image data (column 15, lines 53-67), and an image quality adjustment, in case a judgment (c) to the effect that “the quantity of light is not within a predetermined range” is realized, execution of the image quality adjustment processing is halted, or a degree of brightness value adjustment in the image quality adjustment processing is reduced (column 15, lines 53-67). Sosa teaches that the use of image generation record information that includes information relating to quantity of light of the supplemental light source at the time of generation of the image data, and an image quality adjustment, in case a judgment (c) to the effect that “the quantity of light is not within a predetermined range” is realized, execution of the image quality adjustment processing is halted, or a degree of brightness value adjustment in the image quality adjustment processing is reduced is preferred in order to process the image for proper reproduction of colors with respect to the ratio of natural and supplemental lighting (column 15, lines 53-67). Therefore, it would have been obvious to one of ordinary skill in the art to modify Sano such that the image generation record information further

includes information relating to quantity of light of the supplemental light source at the time of generation of the image data, and the image quality adjustment includes wherein regardless of realization of the judgment (a), when a judgment (c) to the effect that “the quantity of light is not within a predetermined range” is realized, execution of the image quality adjustment processing is halted, or a degree of brightness value adjustment in the image quality adjustment processing is reduced in order to reproduce the image with a proper balance of natural and supplemental lighting, as suggested by Sosa.

15. In regard to **claim 9**, note Sano discloses a method of performing image processing using image data generated by an image generator and image generation record information that is associated with the image data, as discussed with respect to claim 1 above. Therefore, it can be seen that Sano fails to explicitly disclose that the image generation record information further contains information relating to quantity of light of the supplemental light source at the time of generation of the image data, and the image quality adjustment includes adjusting a degree of brightness value adjustment in the image quality adjustment processing at least on the basis of the quantity of light.

In analogous art, Sosa discloses the use of an image generation record containing information relating to quantity of light of the supplemental light source at the time of generation of the image data (column 15, lines 53-67), and an image quality adjustment adjusts a degree of brightness value adjustment in an image quality adjustment processing at least on the basis of the quantity of light (column 15, lines 53-67). Sosa teaches that the use of an image generation record containing information

relating to quantity of light of the supplemental light source at the time of generation of the image data, and an image quality adjustment that adjusts a degree of brightness value adjustment in an image quality adjustment processing at least on the basis of the quantity of light is preferred in order to process the image for proper reproduction of colors with respect to the ratio of natural and supplemental lighting (column 15, lines 53-67). Therefore, it would have been obvious to one of ordinary skill in the art to modify Sano such that the image generation record information further contains information relating to quantity of light of the supplemental light source at the time of generation of the image data, and the image quality adjustment includes adjusting a degree of brightness value adjustment in the image quality adjustment processing at least on the basis of the quantity of light in order to reproduce the image with a proper balance of natural and supplemental lighting, as suggested by Sosa.

16. **Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sano (US Patent 5,739,924) in view of Terashita (US Patent 7,359,571).**

17. In regard to **claim 8**, note Sano discloses a method of performing image processing using image data generated by an image generator and image generation record information that is associated with the image data, as discussed with respect to claim 2 above. Therefore, it can be seen that Sano fails to explicitly disclose that the image quality adjustment includes performing a process wherein regardless of realization of the judgment (a), in case a judgment (d) to the effect that “size of an area of linked pixels having brightness above a first predetermined brightness value in the

image data is larger than a predetermined threshold value" is realized, execution of the image quality adjustment processing is halted, or a degree of brightness value adjustment in the image quality adjustment processing is reduced.

In analogous art, Terashita discloses the use of an image quality adjustment performing a process, wherein in case a judgment (d) to the effect that "size of an area of linked pixels having brightness above a first predetermined brightness value in the image data is larger than a predetermined threshold value" is realized, execution of the image quality adjustment processing is halted, or a degree of brightness value adjustment in the image quality adjustment processing is reduced (column 5, line 27—column 6, line 57; when the face area is recognized, the brightness is adjusted).

Terashita teaches that the use of an image quality adjustment performing a process, wherein in case a judgment (d) to the effect that "size of an area of linked pixels having brightness above a first predetermined brightness value in the image data is larger than a predetermined threshold value" is realized, execution of the image quality adjustment processing is halted, or a degree of brightness value adjustment in the image quality adjustment processing is reduced is preferred in order to improve reproducibility in both the highlight range and the shadow range (column 6, lines 58-67). Therefore, it would have been obvious to one of ordinary skill in the art to modify Sano such that the image generation record information further includes information relating to quantity of light of the supplemental light source at the time of generation of the image data, and the image quality adjustment includes wherein regardless of realization of the judgment (a), when a judgment (c) to the effect that "the quantity of light is not within a second

predetermined range” is realized, execution of the image quality adjustment processing is halted, or a degree of brightness value adjustment in the image quality adjustment processing is reduced in order to improve reproducibility in both the highlight range and the shadow range, as suggested by Terashita.

18. **Claims 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sano (US Patent 5,739,924) in view of Matsuura (US Patent 6,493,468).**

19. In regard to **claim 13**, note Sano discloses a method of performing image processing using image data generated by an image generator and image generation record information that is associated with the image data, as discussed with respect to claim 1 above. Therefore, it can be seen that Sano fails to explicitly disclose that a target area of processing targeted for the image quality adjustment processing includes a first type area of linked maximum brightness pixels having maximum possible brightness value.

In analogous art, Matsuura discloses the use of a target area of processing targeted for an image quality adjustment processing includes a first type area of linked maximum brightness pixels having maximum possible brightness value (column 10, lines 1-11: the pixels in the range 99%-100%). Matsuura teaches that the use of a target area of processing targeted for an image quality adjustment processing includes a first type area of linked maximum brightness pixels having maximum possible brightness value is preferred in order to suppress bleaching out of highlight areas (column 12, lines 32-59). Therefore, it would have been obvious to one of ordinary skill

in the art to modify Sano to include the use of a target area of processing targeted for an image quality adjustment processing includes a first type area of linked maximum brightness pixels having maximum possible brightness value in order to suppress bleaching out of highlight areas, as suggested by Matsuura.

20. In regard to **claim 14**, note Matsuura discloses a second type area meeting a specific condition, situated in the vicinity of the first type area (column 10, lines 1-11: the pixels in the range 96%-97%).

21. In regard to **claim 15**, note the primary reference of Sano in view of Matsuura discloses the use of a method of performing image processing using image data generated by an image generator and image generation record information that is associated with the image data, as discussed with respect to claim 13 above.

Therefore, it can be seen that the primary reference fails to explicitly disclose that the specific condition includes at least a condition (e) to the effect that “the second type area is composed of pixels whose shortest distance from the first type area is equal to or less than a first predetermined distance”.

Official Notice is taken that the concepts and advantages of determining a secondary region of processing based on the distance from a primary region of image data are notoriously well known and expected in the art. Therefore, it would have been obvious to one of ordinary skill in the art to modify the primary reference to include the selection of the second type area based on the distance from the first type area in order to blend the highlight regions with the rest of the image, as well as provide proper edge enhancement/softening.

22. In regard to **claim 16**, note Matsuura discloses that the specific condition includes at least a condition (f) to the effect that “the second type area is an area composed of pixels whose brightness value is equal to or greater than a second predetermined brightness value, and is an area linked to the first area” (column 10, lines 1-11: the pixels in the range 96%-97%).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US005617141A: image enhancement based on stored image information.

US007262798B2: image enhancement based on image information.

US 20040239963A1: image enhancement based on image information.

US005550587A: image enhancement based on image information.

US006011547A: image enhancement based on stored image information.

US005808681A: image enhancement based on image information.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISS S. YODER III whose telephone number is (571)272-7323. The examiner can normally be reached on M-F: 8 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on (571) 272-7372. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2622

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. S. Y./  
Examiner, Art Unit 2622

/Lin Ye/  
Supervisory Patent Examiner, Art Unit 2622